Welcome to NEW Water

Quarterly Update Meeting: *Resource Recovery and Electrical Energy Project & Customer Quarterly Combined*

March 5, 2015

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Overview of Today's Update

- Welcome! This year, combining R2E2 and Quarterly Update meetings
- Brief background for any newcomers
- NEW Water Financial Update
- R2E2 Update
- Interceptor Master Plan
- Billing Methodology
- Adaptive Management
- How to stay informed

Pictured here: 2015 winter is not as bad as 2014, not as many equipment issues. As always, NEW Water is providing round-the-clock service

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NEW Water at a Glance

- Serving community since 1931
- Wholesale provider to 18 municipalities, 285-square mi.
- Two facilities treating average 38 million gallons per day
- Clean water stewards 24/7/365
- Award-winning effluent cleaner than receiving waters

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NEW Water Finances: Overview

- $300 million in fixed assets, 110 miles of interceptors, 1,183 manhole structures, air releases, lift stations, wet wells, meter stations, junction chambers
- Aaa bond rating from Moody's
- Budgeting begins in March; budget runs off calendar year January – December
- Currently in process of annual audit

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NEW Water Finances: 2015 Budget

- $35.3 million
  - $19 million operations and maintenance
  - $16.3 million capital and debt service
- 9.9% rate increase over 2014
  - $2.90 per thousand gallons municipal rate charge
- Main drivers are:
  - Debt service for new solids handling facility
  - Green Bay Facility disinfection system
  - Reduced customer loadings (including 10% reduction in Biochemical Oxygen Demand)
  - Compliance with the new Wisconsin Pollutant Discharge Elimination System permit

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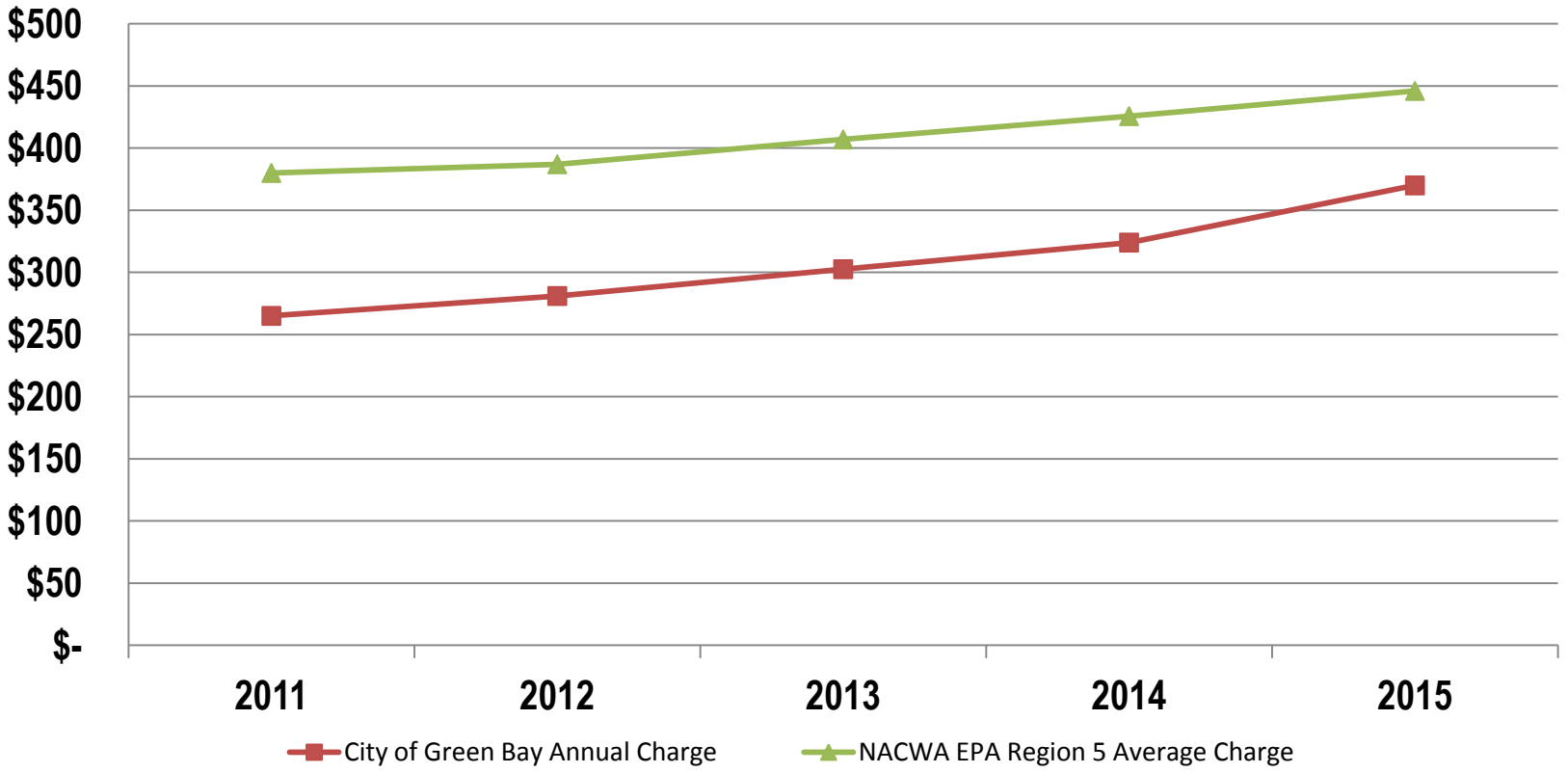
Finances: Our Rates Compared



Source: National Association of Clean Water Agencies
EPA region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

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Resource Recovery & Electrical Energy

- New solids handling facilities including:
  - Anaerobic digestion
  - Centrifuge dewatering
  - Nutrient recovery system
  - Solids drying
  - Fluid bed incineration
  - Air pollution control equipment

R2E2 PROJECT

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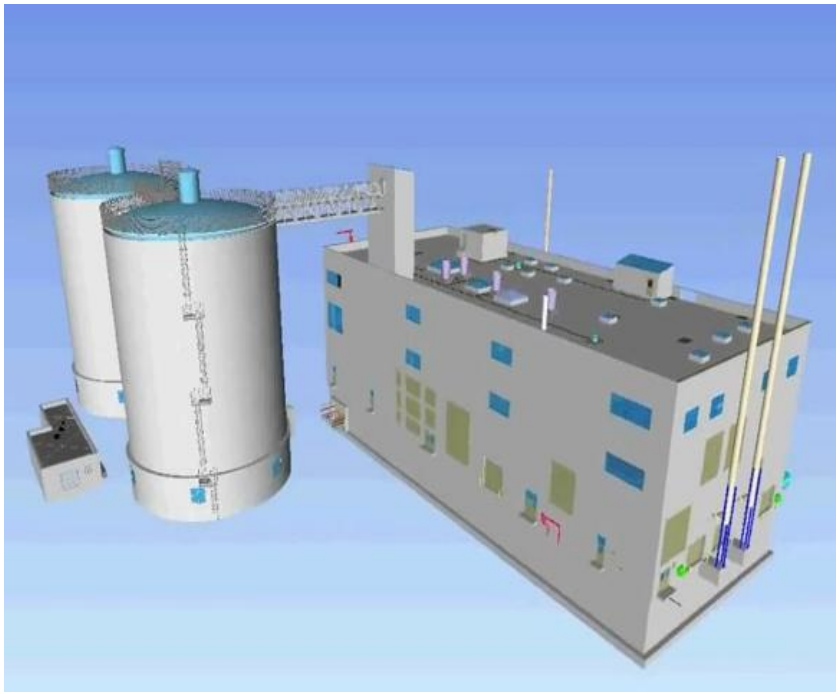
Resource Recovery & Electrical Energy

- Resource recovery features:
  - Electrical energy generation
    - Biogas engines utilizing digester gas
  - Heat recovery
    - Biogas engine jacket & exhaust
    - Fluidized bed incineration exhaust
    - Utilize heat for solids drying, digester and building heat
  - Nutrient recovery
- Estimated energy savings = $2.2 million/yr



R2E2 PROJECT

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Resource Recovery: Struvite

- Nutrient recovery in the form of struvite
  - Converts into a fertilizer product
  - Creates a $400,000 revenue stream
  - Reduces maintenance of equipment & piping
  - Multiform Harvest was pre-selected vendor

R2E2 PROJECT

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R2E2 Budget Summary

- Project budget summary
  - $147,000,000 capital cost from the 2011 Facility Plan estimate
  - $149,000,000 current engineer's estimate
- Contractor prequalification completed
  - (6) general contractors
  - (4) mechanical contractors
  - (4) electrical contractors

R2E2 PROJECT

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R2E2 Timeline

Description	Estimated Dates
Contract 33 – Construct New Switchgear Building and Substation	Complete
Contract 33 – New Switchgear Operational	Complete
Contract 33 – Substantial Completion	April 2015
Contract 34 – Bidding Period	April - May 2015
Contract 34 – Digestion & Solids Facilities Construction	Mid 2015 – End 2017
Contract 34 – Digestion & Solids Facilities Commissioning	Late 2017 – Early 2018
Contract 34 – Digestion & Solids Facilities Operational	Early 2018
Contract 34 – Digestion & Solids Facilities Optimization & Emissions Testing	Early 2018 – Mid 2018
Contract 34 – Existing Solids Facilities Shutdown	Early 2018
Contract 35 – Existing Solids Building Demolition & Site Restoration	Mid 2018 – Mid 2019

Interceptor System Master Plan Update

Phase 1: Completed in 2014

- Review of existing NEW Water interceptor records and databases
- Collection of sanitary sewer information and water billing records (where available) from customer municipalities
- Review of Customer Allocations in NEW Water interceptors
- Selection of the modeling software
- Development of a flow monitoring plan
- Initial Inflow and Infiltration Analysis

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Interceptor System Master Plan Update
Phase 2: 2015 - 2016

- Phase 2 approved January, 2015
- Flow meter installation in select areas to better define flows within the interceptor system. Data will be used to calibrate the hydraulic model of the NEW Water interceptor system
- Hydraulic modeling of the NEW Water interceptor system using MIKEURBAN
  - Will help identify any system capacity deficiencies
- Final Inflow and Infiltration Analysis
- Development of a 20-year Capital Improvement Plan
- Finalizing the Interceptor System Master Plan Report

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Billing Methodology Project Update

- Stakeholder Advisory Committee met in 2014 to select equitable and defensible methodology
- A “mass loading” option was selected, slight revision to status quo
- Beginning design of new program in April
- Implementation for 2016

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Adaptive Management - Background

- NEW Water is seeking lowest-cost option for new phosphorus rules
- Adaptive Management offers a more cost-effective, and environmentally sustainable solution
- Facility improvements would cost:

  $223 - $394 million capital cost + $2 million annual O&M cost

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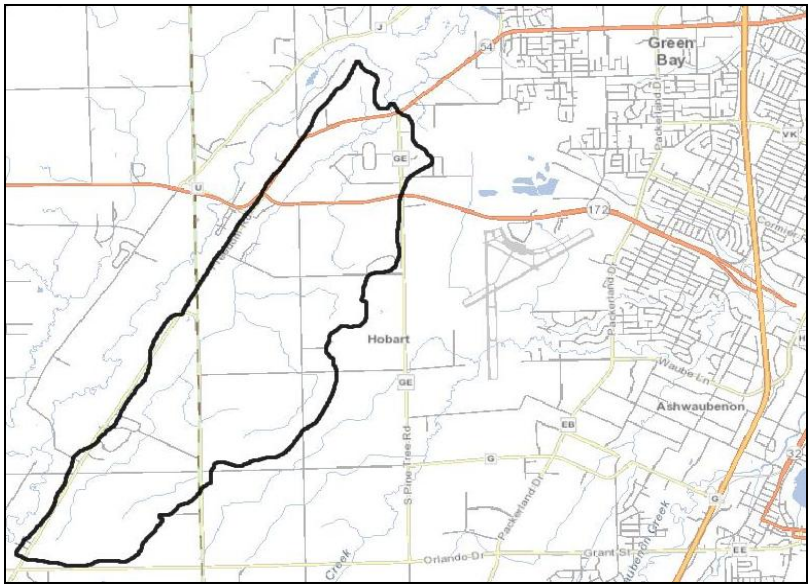
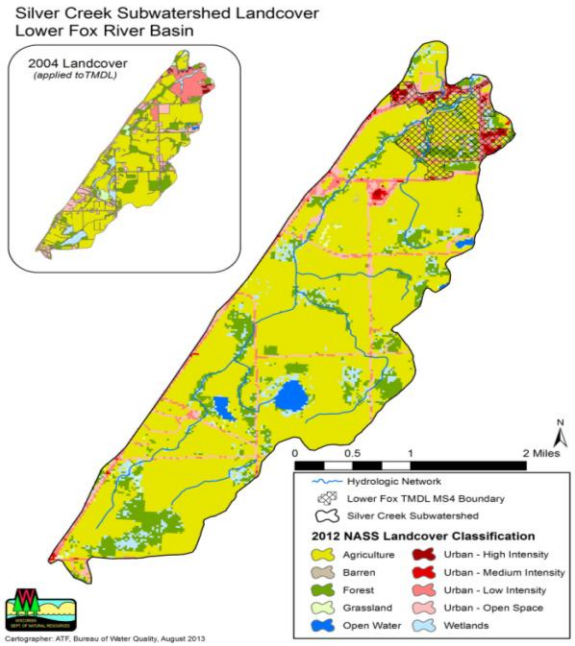
Adaptive Management Pilot: Silver Creek

Silver Creek Watershed (LF05-8) a sub-watershed of the Lower Duck Creek (HUC12 040302040106





Watershed Area	4799.8 acres (7.50 mi2)	
MS4	346 acres (7.2% of watershed)	
Land cover 2012 Cropland Data Layer USDA NRCS	Agricultural	**2296.4 acres (47.8%)**
	Forest	585.1 acres (12.2%)
	Grassland	12.3 acres (0.3%)
	Pasture	1065 acres (22.2%)
	Urban	503.9 acres (10.5%)
	Water	64.5 acres (1.3%)
	Wetlands	272.6 acres (5.7%)
Stream Length	**14.93 miles**	
TMDL Phosphorus Baseline Load	**3391 lbs**. (0.71 lbs. per acre)	

Silver Creek 2013-2014: Inventory & Partnership Building

- Installation of US Geological Survey station
  - Event sampling, flow and loading measurements
- Soil sampling and analyze data
- Stakeholder and landowner/grower meetings
- Stakeholder commitments and work planning
- Nutrient Management Plans

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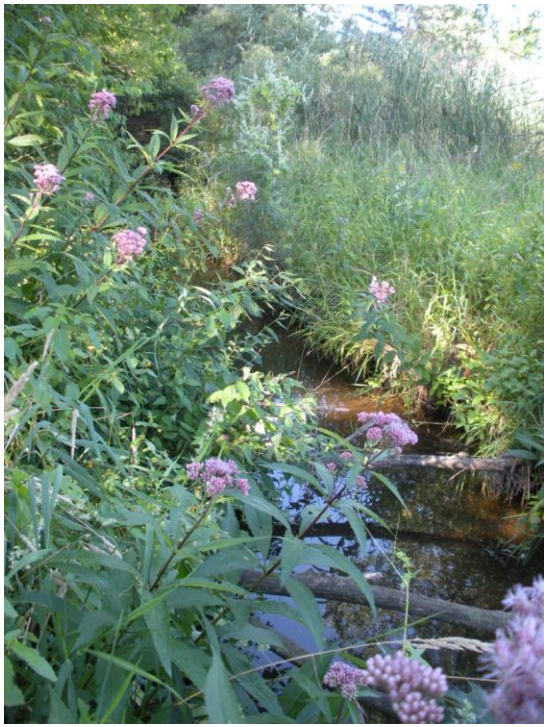
Silver Creek: 2015 - Onward: Conservation Planning / Implementation

- Finish soil sampling
- Develop Nutrient Management Plans and review with grower
- Schedule field walks and develop Conservation Plans
- Enrollment into programs and identify cost share needs
- Continued implementation of best management practices (BMPs)
- Wetland restoration planning
- 2018: NEW Water must provide information to DNR regarding future direction of phosphorus reduction options as required in WPDES permit
  - Is Adaptive Management a more cost-effective solution than capital investment at the treatment facility?
  - Can more phosphorus and sediment be removed from the watershed through Adaptive Management than facility improvements?



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The Business Case for the Watershed

- NEW Water has captured more than $2 million in grants for Silver Creek
- NEW Water is driven by finding lowest-cost approach to phosphorus reduction
- Silver Creek, if successful, could be replicated

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Questions/Comments?

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